

## ABSTRACT

A virtual network generation system facilitates the dynamic establishment, maintenance and dissolution of private network communities (PNCs), which may include extended communication links between isolated and geographically dispersed wired and/or wireless electronic devices, as if the electronic devices were set in their own LAN. The virtual network generation system takes advantage of existing communication infrastructure, such as the Internet, Wide Area Networks (WANs), power-lines, telephone lines, and cable networks, and uses them as shared backbones providing dynamic PNC links. Electronic devices connected to the dynamic private network become virtual nodes relating to different PNCs.